

IN THE CLAIMS:

1. (Currently Amended) A puncture instrument ~~for housing~~ comprising a plurality of puncture needles for puncturing the surface of a biologic body and for performing seriatim puncturing with each of the puncture needles ~~puncture operations continuously~~, said puncture instrument comprising:

a puncture needle cartridge ~~holding a plural~~ for housing a plurality of puncture needles ~~in a state where the puncture needles are~~ connected in series in an axis direction of the puncture instrument,

each puncture needle comprising a body member and a needle member, wherein a base end of the needle member is secured in and substantially coaxial with the body member, and a needle point end protrudes forwardly; and the body member comprising a forward end and a rear end having substantially complementary shapes such that the needle members are hygienically maintained and deployed, and such that ~~wherein~~ the puncture needles are connected in such a manner that removal of a puncture needle pulls the next puncture needle to the puncture position.

2. (Currently Amended) A puncture instrument as defined in Claim 1 wherein said puncture needle cartridge holds each of the respective puncture needles in such a manner that ~~a front~~ the needle point end of the puncture needle is protected by ~~a portion~~ the rear end of the body member of another puncture needle which is positioned immediately to the front ~~at a rear end~~ of the puncture needle.

3. (Currently Amended) A puncture instrument as defined in Claim 2 wherein ~~said puncture needle comprises a needle part, and the body member is~~ an elastic deformation member,

said puncture needle cartridge holds each puncture needle in a state where ~~a front~~ the needle point end of the puncture needle is protected by ~~[[an]]~~ the rear end of the elastic deformation member of another puncture needle which is positioned immediately to the front at a ~~rear end~~ of the puncture needle, and

~~[[said]]~~ the rear end of the elastic deformation member of one puncture needle elastically grips ~~a front~~ the forward end of the elastic deformation member of ~~[[a]]~~ the next puncture needle.

4. (Previously Presented) A puncture instrument as defined in Claim 1 wherein said puncture needle cartridge is located in a cylindrical case, and comprises:

a puncture needle cartridge stopping member for stopping the puncture needle cartridge in a predetermined position in an axis direction of the case,

a biasing member for biasing the puncture needle cartridge in one direction in the case, and

a puncture button for allowing the the biasing member to move the puncture needle cartridge in the one direction, to start a puncture operation.

5. (Currently Amended) A puncture instrument as defined Claim 1 further including a remaining quantity check means for checking the remaining quantity of the ~~plural~~ plurality of puncture needles in the puncture needle cartridge.

6. (Original) A puncture instrument as defined in Claim 5 wherein
said remaining quantity check means has, on a side surface of the puncture instrument, a
puncture needle remaining quantity check window through which the puncture needles existing
in the puncture needle cartridge can be visually checked.

7. (Previously Presented) A puncture instrument as defined in Claim 1 wherein
said puncture needle cartridge is detachably located in the puncture instrument.

8. (Currently Amended) A puncture needle cartridge ~~which contains~~ comprising a
plurality of puncture needles for puncturing the surface of a biologic body, ~~[[and]]~~ wherein the
cartridge is housed in a puncture instrument that is able to perform puncture operations
continuously for performing seriatim puncturing with each of the puncture needles, wherein

said puncture needle cartridge holds the ~~plural~~ plurality of puncture needles ~~in a state~~
~~where the puncture needles are~~ connected in series in an axis direction of the puncture
instrument,

each puncture needle comprises a body member and a needle member, wherein a base end
of the needle member is secured in and substantially coaxial with the body member, and a needle
point end protrudes forwardly; and the body member comprises a forward end and a rear end
having substantially complementary shapes such that the needle members are hygienically
maintained and deployed, and such that ~~wherein~~ the puncture needles are connected in such a
manner that removal of a puncture needle pulls the next puncture needle to the puncture position.

9. (Currently Amended) A puncture needle cartridge as defined in Claim 8 wherein ~~a front~~ the forward end of the body member of each of the ~~plural~~ plurality of puncture needles is fitted to ~~a portion~~ the rear end of the body member of another puncture needle which is positioned immediately to the front ~~at a rear end~~ of the puncture needle.

10. (Currently Amended) A puncture needle cartridge as defined in Claim 9 wherein ~~each of said plural puncture needles comprises a needle part and~~ the body member is an elastic deformation member,

~~a front end of each puncture needle is fitted to an elastic deformation member of another puncture needle which is positioned at a rear end of the puncture needle, and~~

~~[[said]]~~ the rear end of the elastic deformation member of each puncture needle elastically grips ~~a front~~ the forward end of the elastic deformation member of ~~another~~ the next puncture needle.

11. (Original) A puncture needle cartridge as defined in Claim 8 further including puncture needle stopping members for holding the respective puncture needles at predetermined positions in the puncture needle cartridge.

12. (Previously Presented) A puncture needle cartridge as defined in Claim 11 wherein
said puncture needle stopping members are located in the puncture needle cartridge at a regular interval that is approximately equal to the length of the puncture needle.

13. (Currently Amended) A puncture needle cartridge as defined in Claim [[8]] 2, wherein a fitting strength between the respective puncture needles is larger than a load capable of disengaging the puncture needle from a respective puncture needle stopping member.

14. (Original) A puncture needle cartridge as defined in Claim 8 further including a puncture needle retaining elastic member for holding a puncture needle positioned at the head of the puncture needle cartridge to prevent escape and dropout of the puncture needle from the puncture instrument body.

15. (Original) A puncture needle cartridge as defined in Claim 14 wherein said puncture needle retaining elastic member is integrated with the puncture cartridge.

16. (Previously Presented) A puncture needle cartridge as defined in Claim 8 wherein each of said puncture needles has, at its surface, two dents which are respectively engageable with a puncture needle stopping member for holding the puncture needle in the puncture needle cartridge and engaged with a puncture needle stopping elastic member for preventing escape and dropout of the puncture needle from the puncture needle cartridge.

17. (Currently Amended) A puncture needle cartridge as defined in Claim 8 wherein a puncture needle group comprising said ~~plural~~ plurality of puncture needles ~~being connected in series~~ comprises a puncture needle cap which protects [[a]] the needle point end part of [[a]] the puncture needle that is positioned ~~at the head~~ to the front of the group.

18. (Previously Presented) A puncture needle cartridge as defined in Claim 8 further including

a rotation stopping member for engaging the body of the puncture instrument to prevent the puncture instrument from rotating around the axis of the puncture instrument.

19. (Currently Amended) A puncture needle cartridge as defined in Claim 8 further including a remaining quantity check means for checking the remaining quantity of the ~~plural~~ plurality of puncture needles in the puncture needle cartridge.

20. (Currently Amended) A puncture needle cartridge as defined in Claim 19 wherein said remaining quantity check means comprises a variation of the respective colors of the ~~plural~~ plurality of puncture needles.

21. (Previously Presented) A puncture needle cartridge as defined in Claim 19 wherein said remaining quantity check means comprises numbers (production codes) assigned to the respective puncture needles.

22. (Currently Amended) A puncture needle cartridge as defined in Claim 8 of the present invention wherein

~~when a new puncture needle is loaded in the puncture needle cartridge,~~ a puncture needle group comprising said ~~plural~~ plurality of puncture needles being connected in series is loaded in the puncture needle cartridge, by inserting new puncture needles in the puncture needle cartridge.

23. (Currently Amended) A puncture needle cartridge as defined in Claim 22 wherein
[[when]] said puncture needle group is loaded in the puncture needle cartridge, ~~the~~
~~puncture needle group is loaded only~~ in only one direction of the puncture needle cartridge.

24. (Currently Amended) A puncture needle cartridge as defined in Claim 22 further
including

an improper loading prevention return member for preventing the puncture needle group
from being loaded in a wrong direction ~~when it is loaded~~ in the puncture needle cartridge.

25. (Original) A puncture needle cartridge as defined in Claim 8 being detachable
and attachable from/to the puncture instrument.

26. (Currently Amended) A puncture instrument set comprising
a puncture instrument having a puncture needle cartridge [[that]] holding a
plurality of puncture needles for puncturing the surface of a biologic body, said puncture
instrument performing seriatim puncturing with each of the puncture needles, said puncture
needles being connected in series in an axis direction of the cartridge, each puncture needle
comprising a body member and a needle member, wherein a base end of the needle member is
secured in and substantially coaxial with the body member, and a needle point end protrudes
forwardly, the body member comprising a forward end and a rear end having substantially
complementary shapes such that the needle members are hygienically maintained and deployed,
and such that ~~wherein~~ the puncture needles are connected in such a manner that removal of a

puncture needle pulls the next puncture needle to the puncture position, ~~and said puncture instrument performing puncture operation continuously; and~~

a puncture needle replacement jig for setting the puncture needle cartridge at a puncture operation start position for a next puncture operation, and for removing a used puncture needle from the puncture needle cartridge, after puncturing by the puncture needle.

27. (Original) A puncture instrument set as defined in Claim 26 wherein said puncture needle replacement jig includes a replacement jig return member which holds the puncture needle after puncturing, and removes the puncture needle from the puncture needle cartridge.

28. (Previously Presented) A puncture instrument set as defined in Claim 26 wherein said puncture needle replacement jig is for setting the puncture needle cartridge at the puncture operation start position simultaneously with removal of the puncture needle after puncturing.

29. (Currently Amended) A puncture instrument set as defined in Claim 26 wherein when the puncture needle is removed from the puncture needle cartridge by the puncture needle replacement jig after puncturing, each of the ~~plural~~ plurality of puncture needles connected in series in the puncture needle cartridge is moveable toward a front end of the puncture needle cartridge until it is held by a puncture needle stopping member which is capable of holding each puncture needle at a predetermined position in the puncture needle cartridge.

30. (Previously Presented) A puncture instrument set as defined in Claim 26 further including

a puncture needle retaining elastic member for holding a puncture needle positioned at the head of the puncture needle cartridge to prevent escape and dropout of the puncture needle from the puncture instrument body;

wherein said puncture needle retaining elastic member is able to bend within an elasticity range of the puncture needle retaining elastic member due to fitting of the elastic member to a front end portion of the puncture needle replacement jig, thereby detaching the puncture needle positioned at the head of the puncture needle cartridge from the puncture needle retaining elastic member.

31. (Currently Amended) A puncture instrument set as defined in Claim 26 wherein said puncture instrument is provided with a remaining quantity check means for checking the remaining quantity of the ~~plural~~ plurality of puncture needles in the puncture needle cartridge.

32. (Withdrawn) A puncture instrument set comprising:
a puncture instrument which is provided with a puncture needle cartridge that holds a plurality of puncture needles for puncturing the surface of a biologic body, said puncture needles being connected in series in an axis direction of the cartridge, and said puncture instrument performing puncture operation continuously; and

a puncture needle disposal instrument which performs, after puncturing by the puncture needle, setting of the puncture needle cartridge at a puncture operation start position for a next

puncture operation, removal of the used puncture needle from the puncture needle cartridge, and storage of the removed puncture needle to be discarded.

33. (Withdrawn) A puncture instrument set as defined in Claim 32 wherein said puncture needle disposal instrument comprises

a disposal instrument return member for holding the used puncture needle, and removing the used puncture needle from the puncture instrument, and

a cylindrical member which can store a plurality of the removed puncture needles to be discarded.

34. (Withdrawn) A puncture instrument set as defined in Claim 32 wherein said puncture needle disposal instrument comprises

a disposal instrument return member for holding the used puncture needle, and removing the used puncture needle from the puncture instrument,

a cylindrical member which can store a plurality of the removed puncture needles to be discarded, and

a disposal box having an opening into which the cylindrical member is inserted, said disposal box being able to store the plural puncture needles to be discarded.

35. (Withdrawn) A puncture needle disposal instrument for removing, from a puncture instrument having a holding member which detachably holds a puncture needle for puncturing the surface of a biologic body, the puncture needle and discarding the same,

comprising

a disposal instrument return member for holding the used puncture needle, and removing the puncture needle from the puncture instrument, and

a cylindrical member which stores a plurality of the removed puncture needles to be discarded.

36. (Withdrawn) A puncture needle disposal instrument as defined in Claim 35 wherein

a front end of the cylindrical member is closed to prevent the disposal puncture needles stored in the cylindrical member from getting out of the cylindrical member.

37. (Withdrawn) A puncture needle disposal instrument for removing, from a puncture instrument having a holding member which detachably holds a puncture needle for puncturing the surface of a biologic body, the puncture needle and discarding the same, comprising

a disposal instrument return member for holding the used puncture needle, and removing the puncture needle from the puncture instrument,

a cylindrical member which stores a plurality of the removed puncture needles to be discarded, and

a disposal box having an opening into which the cylindrical member is inserted, said disposal box being able to store the plural puncture needles to be discarded.

38. (Withdrawn) A puncture needle disposal instrument as defined in Claim 37

wherein

said cylindrical member and said disposal box are separable from each other.

39. (Withdrawn) A puncture needle disposal instrument as defined in Claim 38

further including

a means for closing the opening of the disposal box when the cylindrical member and the disposal box are separated from each other.

40. (Withdrawn) A puncture needle disposal instrument as defined in Claim 35

wherein

the whole or a portion of the cylindrical member is transparent.

41. (Withdrawn) A puncture needle disposal instrument as defined in Claim 35

wherein

the whole or portions of the cylindrical member and the disposal box is transparent.

42. (Withdrawn) A puncture needle disposal instrument as defined in Claim 37

further including

a member for guiding the outer shape of the front end portion of the puncture instrument,
at the upper surface of the opening of the disposal box.

43. (Withdrawn) A puncture needle disposal instrument as defined in Claim 37 further including

a stopper for restricting the depth of insertion of the cylindrical member into the opening of the disposal box, said stopper being disposed in the vicinity of the opening of the disposal box.

44. (New) A puncture instrument as defined Claim 1, wherein

the forward end of the body member is a generally bell-shaped or cylindrical body of revolution open at the lowered end, and includes a radially inwardly protruding fully annular lip; and

the rear end of said body member includes an axially-extending hole for accommodating a needle point of another such puncture needle, and otherwise is a solid body of revolution whose exterior surface is substantially the geometric complement of the interior surface of the forward end, such that the forward end of the body member can fit over and grip the complementary rear end of another such puncture needle.